Climate Update

Food and Agriculture Organization of the United Nations

FSNAU
Food Security and Nutrition Analysis Unit - Somalia

May 2020 Monthly Rainfall and Vegetation Cover (NDVI) (Issued June 16, 2020)

Highlights

The 2020 *Gu* (April-June) season rainfall continued across Somalia through the first dekad of May but decreased during the second and third dekads, with rainfall mostly confined to northern and central regions of the country. Rain gauge recordings indicate a decrease in rainfall intensity and volume during the month of May, with only three stations recording over 100mm: Mataban in Hiraan region (200 mm), Goldogob in Mudug region (136mm) and Mogadishu in Banadir region (105.5 mm) – Table 1.

Satellite-derived rainfall estimates (RFE) also show a decrease in dekadal rainfall during May, with high intensity rainfall recorded in the first dekad and a subsequent decline in the second and third dekads (Maps 2-5). Cumulative rainfall during May was average to near average across most northern and central regions of Somalia. However, total rainfall amounts during the month were 15 to75 mm below average in southern parts of Bay, Gedo and Middle Juba, upper part of Lower Shabelle, most parts of Lower Juba region and pocket areas in northern and central regions (Map 9).

Vegetation cover measured through the Normalized Difference Vegetation Index (NDVI) shows significant improvement in vegetation conditions across all livelihoods due to favourable rains received during the month of April and the first dekad of May (Maps 6-8 and Map 10). As a result, rangeland, browse and water availability is normal to above normal across most parts of the country and this is reflected in average to above average livestock body conditions (PET Score 3-4).

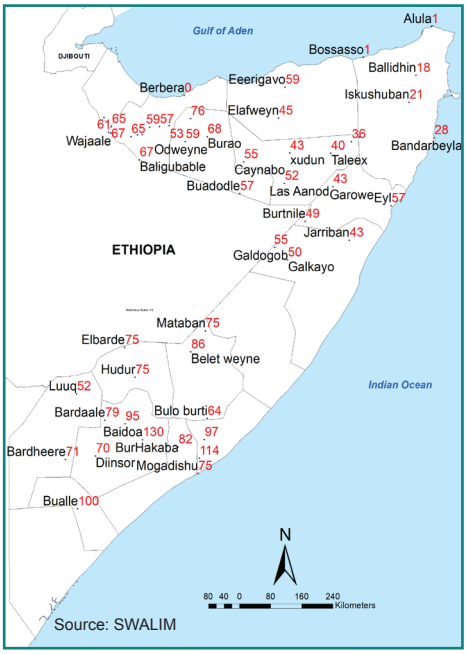
Crops planted during the current Gu season have been performing well in most agro pastoral and elevated parts of riverine livelihoods. However, extended dry spell since mid-May has exposed late planted crops to significant moisture stress.

Widespread desert locust infestation is reported in northern and central regions with moderate localized impacts on pasture and crops. Field reports and current FAO forecasts (June and July) indicate continued high risk of desert locust upsurge in northern and central regions with further expansion to southern Somalia. The risks emanate from continued desert locust breeding inside Somalia and further potential migration from Ethiopia, Kenya and Yemen. Damages due to desert locust can occur anytime until planted crops attain full maturity, starting in late July. Therefore, desert locust continues to pose a significant threat to current Gu season crop production prospects in Somalia. Widespread cricket infestations have also been reported in agropastoral livelihoods of Bay region, forcing farmers to plant their fields up to three times. Cowpea beetle infestations have also been reported in central regions affecting planted crops.

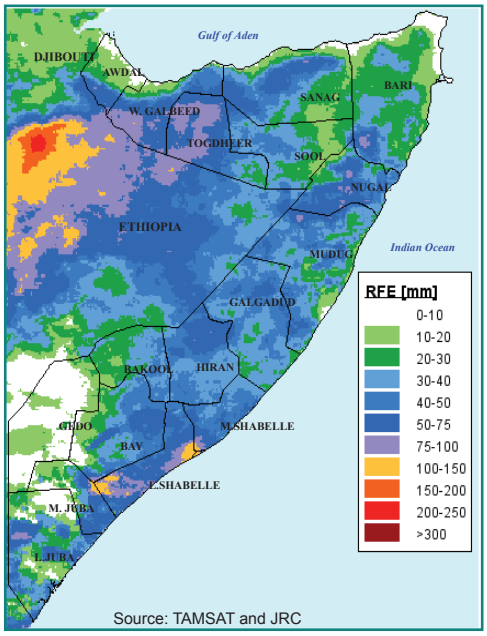
FSNAU field reports indicate that an estimated 50,000 ha of agricultural land has been affected by flooding during April and May. River levels and floodwaters have started to decline since late May in Belet-wein district (Hiraan), Mahaday/Jowhar and Balad districts (Middle Shabelle) and Bar-dhere of Gedo region. However, floodwater continued to cause damages to planted crops and grains stored in underground pits in parts of Hiraan (Bulo-burti and Jalaqsi), Middle Juba and Lower Juba regions. As floodwaters recede, crop planting and replanting is expected to start during the second week of June in most riverine livelihoods.

With little to no rainfall expected through late June, the combined effects of flooding, extended dry spell since mid-May, and Desert Locust and other crop pest infestations will adversely impact the 2020 *Gu* season crop production prospects, with production likely to be 20-30 percent lower than average.

Map 1:May 2020 Monthly Rain Gauge Data (mm)

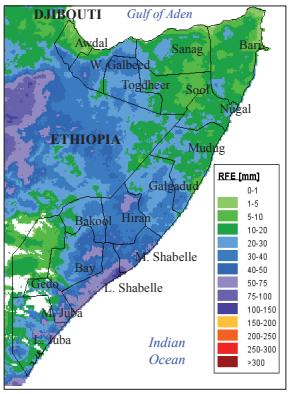


Map 2: May 2020 Monthly Rainfall Estimates (mm)

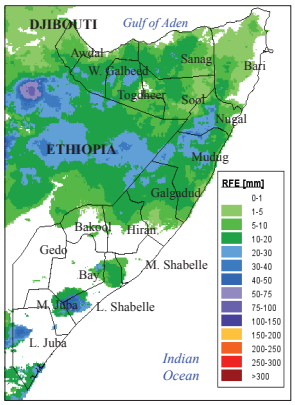


May 2020: Dekadal Rainfall Estimates (RFE) Progression

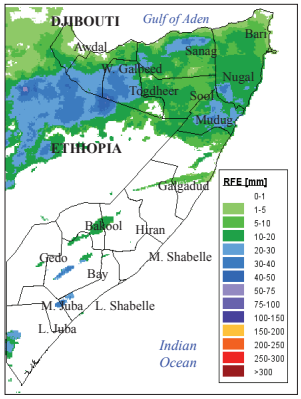
Map 3: 1st Dekad (1-10)



Map 4: 2nd Dekad (11-20)

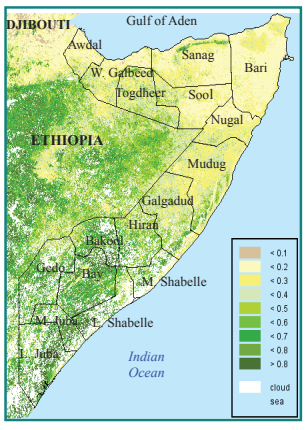


Map 5: 3rd Dekad (21-30)

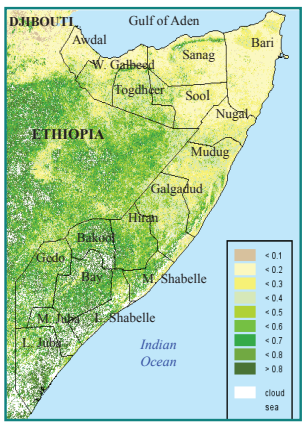


May 2020: Dekadal Vegetation Cover (NDVI) Progression

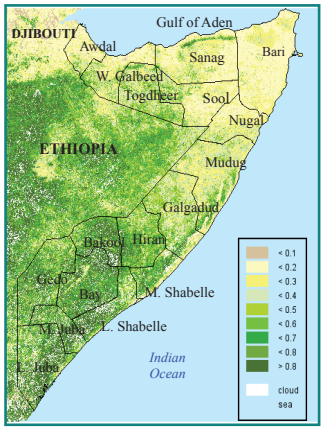
Map 6: 1st Dekad (1-10)



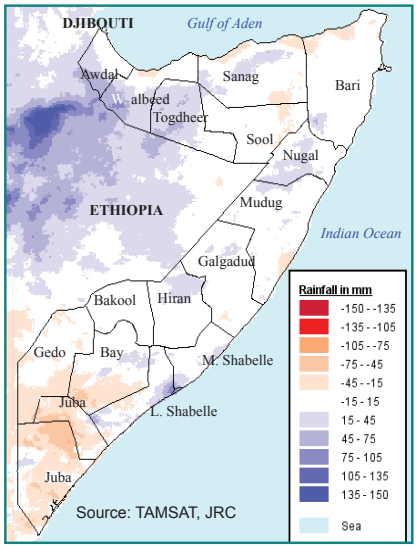
Map 7: 2nd Dekad (11-20)



Map 8: 3rd Dekad (21-30)



Map 9: May 2020 Rainfall Difference from Short Term Average (2001-2019)



Map 10: May 2020 NDVI Absolute Difference from Short Term Average (1999- 2019)

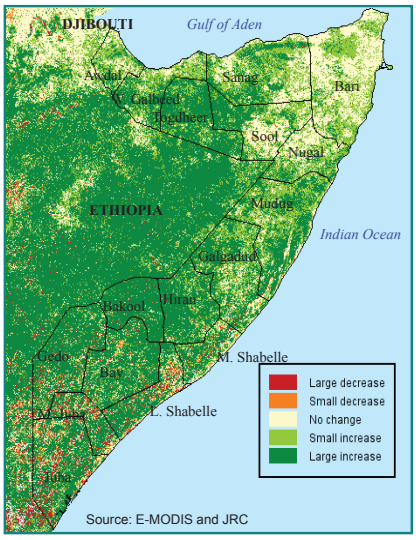


Table 1: Observed rain gauge data compared to Short term averages - STA (May 2020)

Northern Regions

Station Name	Region	dek 1	dek 2	dek 3	May-20	STA
Borama	Awdal	16.0	15.5	0.0	31.5	57.0
Gebilley	Wogooyi Galbeed	3.0	16.0	31.5	50.5	61.0
Malawle	Wogooyi Galbeed	0.0	0.0	32.0	32.0	65.0
Wajaale	Wogooyi Galbeed	24.0	3.0	12.0	39.0	67.0
Hargeisa	Wogooyi Galbeed	9.0	0.0	59.0	68.0	65.0
Daraweyne	Wogooyi Galbeed	3.5	4.0	2.5	10.0	59.0
Cadaadley	Wogooyi Galbeed	35.0	0.0	5.0	40.0	53.0
Dilla	Wogooyi Galbeed	43.0	6.0	48.0	97.0	65.0
Aburin	Wogooyi Galbeed	28.0	0.0	34.0	62.0	65.0
Dhubato	Wogooyi Galbeed	0.0	0.0	19.0	19.0	57.0
Baligubable	Wogooyi Galbeed	11.0	0.0	60.0	71.0	67.0
Berbera	Wogooyi Galbeed	0.0	0.0	0.0	0.0	0.0
Burao	Togdheer	0.0	0.0	22.0	22.0	68.0
Sheikh	Togdheer	56.5	0.0	0.0	56.5	76.0
Odweyne	Togdheer	13.0	0.0	15.5	28.5	59.0
Buadodle	Togdheer	55.5	0.0	0.0	55.5	57.0
Eeerigavo	Sanaag	11.0	9.0	8.0	28.0	59.0
Elafweyn	Sanaag	0.0	9.0	0.0	9.0	45.0
Caynabo	Sool	12.0	0.0	9.0	21.0	55.0
xudun	Sool	6.0	17.0	12.0	35.0	43.0
Taleex	Sool	7.0	0.0	7.0	14.0	40.0
Las Aanod	Sool	28.9	1.0	53.9	83.8	52.0
Bossasso	Bari	0.0	0.0	0.0	0.0	1.0
Qardo	Bari	0.0	37.0	7.0	44.0	31.0
Dangoroyo	Bari	0.0	0.0	0.0	0.0	36.0
Ballidhin	Bari	15.0	0.0	10.0	25.0	18.0
Alula	Bari	0.0	0.0	0.0	0.0	1.0
Bandarbeyla	Bari	7.0	0.0	49.0	56.0	28.0
Iskushuban	Bari	0.0	0.0	0.0	0.0	21.0
Garowe	Nugaal	0.0	0.0	16.2	16.2	43.0
Eyl	Nugaal	12.0	0.0	12.0	24.0	57.0
Burtnile	Nugaal	18.4	14.0	36.3	68.7	49.0
Galdogob	Mudug	68.0	0.0	68.0	136.0	55.0
Jarriban	Mudug	0.0	0.0	0.0	0.0	43.0
Galkayo	Mudug	14.0	0.0	14.0	28.0	50.0

Southern Regions

Station Name	Region	dek 1	dek 2	dek 3	May-20	STA
Hudur	Bakool	61.0	0.0	0.0	61.0	75.0
Elbarde	Bakool	11.0	0.0	0.0	11.0	75.0
Baidoa	Bay	40.0	0.0	0.0	40.0	95.0
Diinsor	Bay	7.8	0.0	11.8	19.6	70.0
Bardaale	Bay	53.0	0.0	1.0	54.0	79.0
BurHakaba	Bay	75.0	0.0	0.0	75.0	130.0
Luuq	Gedo	0.0	1.0	0.0	1.0	52.0
Bardheere	Gedo	0.0	0.0	0.0	0.0	71.0
Belet weyne	Hiraan	38.5	0.0	8.5	47.0	86.0
Bulo burti	Hiraan	63.0	0.0	0.0	63.0	64.0
Mataban	Hiraan	110.0	90.0	0.0	200.0	75.0
Balad	Lower Shabelle	0.0	0.0	0.0	0.0	114.0
Wanleweyne	Lower Shabelle	45.0	0.0	0.0	45.0	82.0
Mogadishu	Banadir	49.5	56.0	0.0	105.5	75.0
Bualle	Middle juba	15.5	5.5	2.5	23.5	100.0
Jowhar	Middle Shabelle	61.0	0.0	0.0	61.0	97.0

*indicates missing data

Monthly rainfall and NDVI perfomance maps

The Mapped NDVI and RFE above represent the differences from Long Term Mean.E-MODIS NDVI is presented as absolute difference from Long Term Mean for the same period (current - long term mean), while TAMSAT-RFE is presented as the relative difference from Long Term Mean (Current*100)/LTM.

Seasonal Trend Graph

The maps and graphs on pages 3 and 4 are produced in collaboration with the FOODSEC Action of the Joint Research Centre of the European Commision. The graphs present seasonal trends of crop specific NDVI (Normalised Difference Vegetation Index) as lines and rainfall values (RFE) as bars for each of the delineated land cover and administrative units (regions and districts). For more information or request on available data, please send an email to: data@fsnau.org.

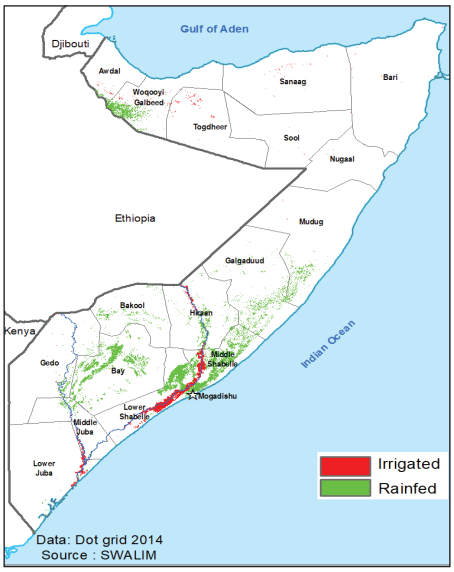
Primary data sources are NOAA/USGS, European Centre for Medium- range Weather Forecast (ECMWF), MARS-JRC, FSNAU and SWALIM. Maps and graphs on this bulletin are produced from four sources.

- Current Rainfall Estimates and NDVI data are derived from NOAA/CPC and DEVCOCAST (www.devcocast.eu) respectively, while the rain gauge data is collected by FAO-SWALIM and FEWSNET.
- The seasonal profiles on page 3 and 4 are produced in collaboration with JRC-MARS. For more information visit http://mars.jrc.europa.eu/mars/About-us/FOODSEC For more information on NDVI visit http://earlywarning.usgs.gov/adds and http://fsausomali.org/fileadmin/uploads/1308.pdf
- This report is a compilation of climate data and field reports on Somalia that FSNAU and FEWS NET regularly review for analysis. For more information on data sources, please refer to page 2.

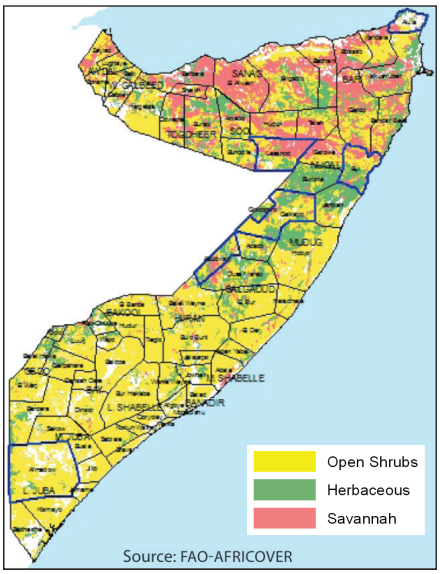
The TAMSAT informatio is available on http://www.met.reading.ac.uk/tamsat/about/

Seasonal rainfall and NDVI trends by region

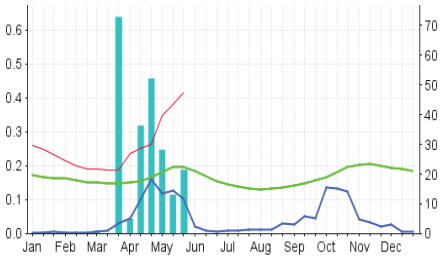
Map 11: Agricultural Areas



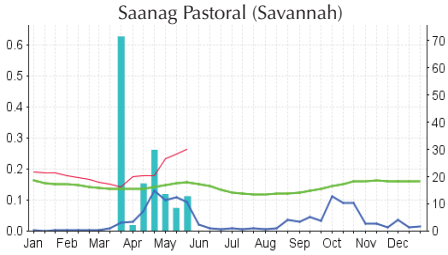
Map 12: Pastoral Areas



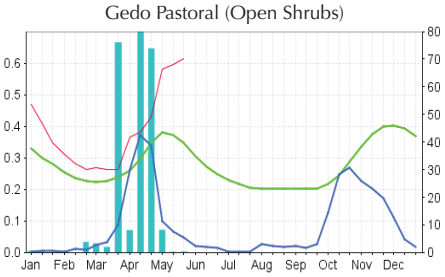
Togdheer Pastoral (Savannah)



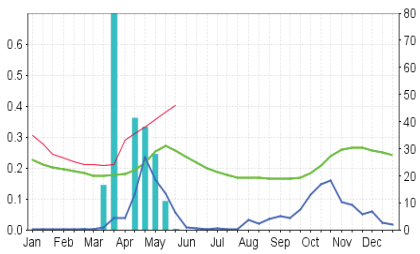
Saanag Pastoral (Savannah)



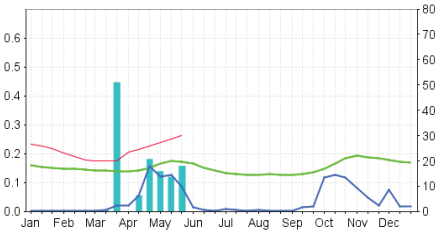
Gedo Pastoral (Open Shrubs)



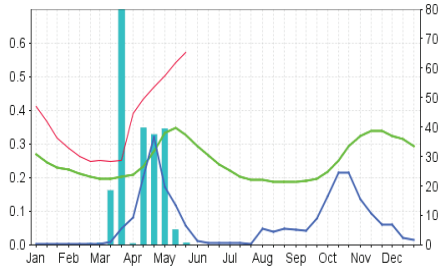
Galgadud Pastoral (Herbaceous)



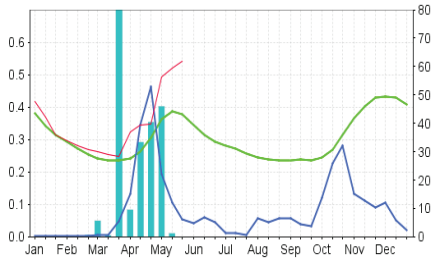
Nugal Pastoral (Open Shrubs)



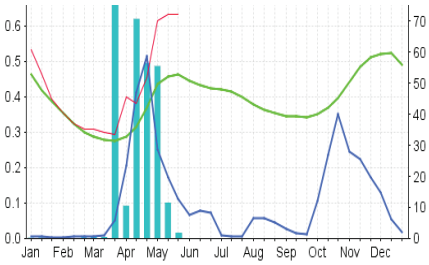
Hiran Agropastoral (Rainfed)



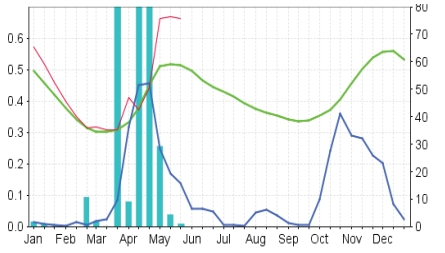
Middle Shabelle Agropastoral (Rainfed)



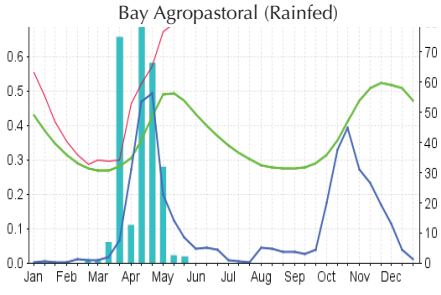
Lower Shabelle Riverine (Irrigated)



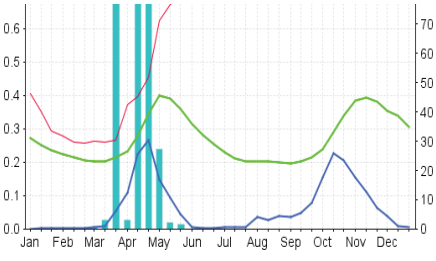
Middle Juba Agropastoral (Rainfed)



Bay Agropastoral (Rainfed)



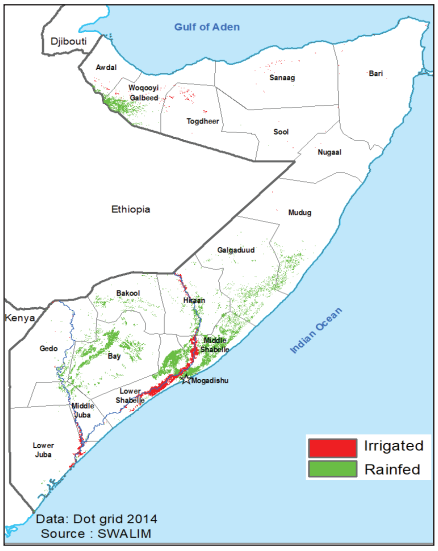
Bakool Agropastoral (Rainfed)



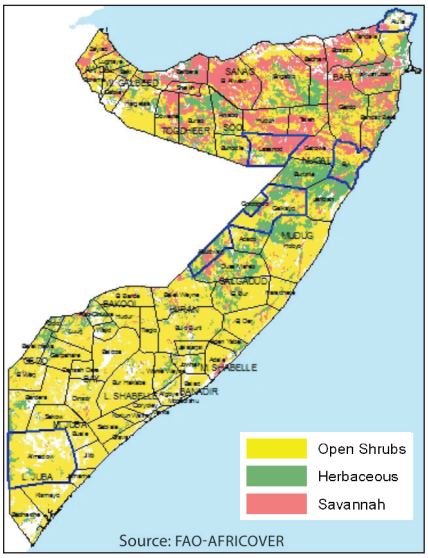
RFE 2020 RFE STA (2001-2019) NDVI 2020 NDVI STA (1999-2019)

Seasonal rainfall and NDVI trends for selected districts

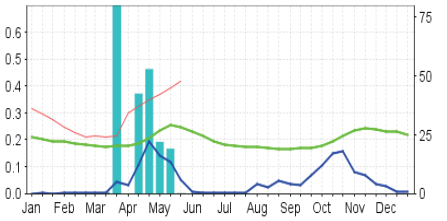
Map 13: Agricultural Areas



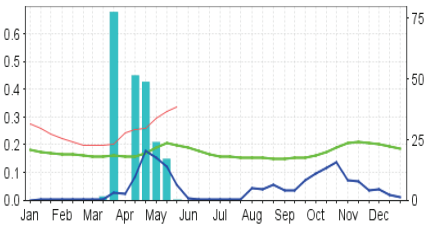
Map 14: Pastoral Areas



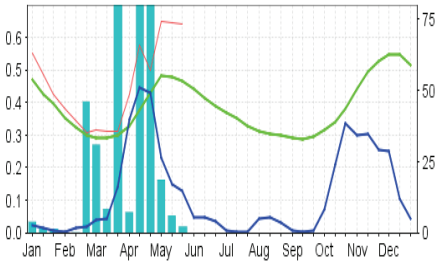
Abudwak Pastoral (Open Shrubs)



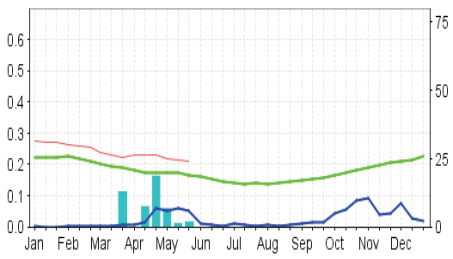
Adado Riverine (Irrigated)



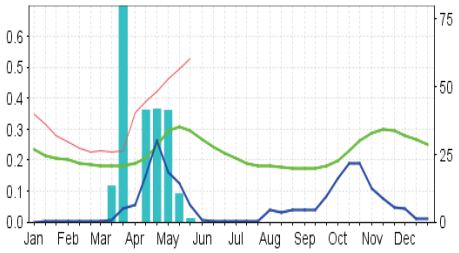
Afmadow Riverine (Irrigated)



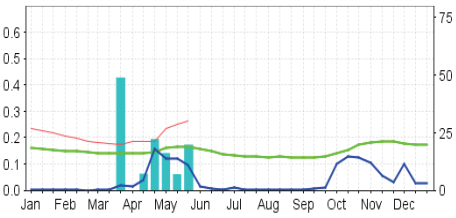
Alula Agropastoral (Rainfed)



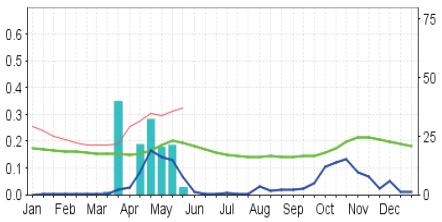
Beletwyne Agropastoral (Herbaceous)



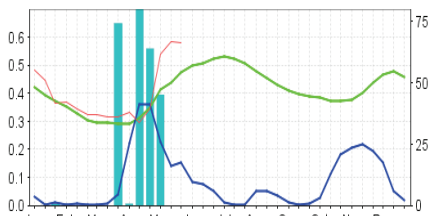
Eyl Pastoral (Open Shrubs)



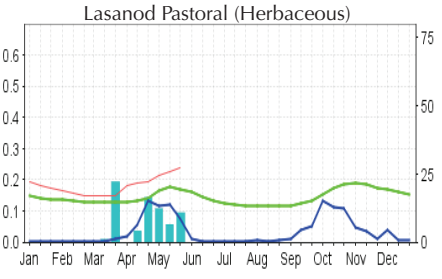
Galkayo (Open Shrubs)



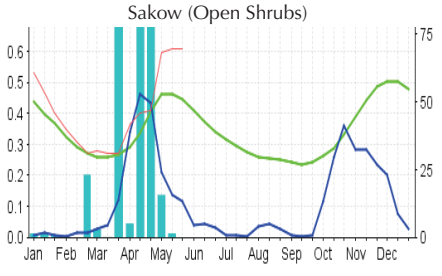
Jamame Pastoral (Herbaceous)



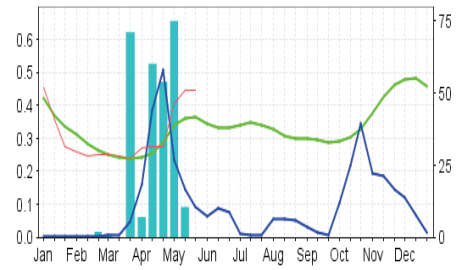
Lasanod Pastoral (Herbaceous)



Sakow (Open Shrubs)



Afgooye Riverine (Irrigated)



RFE 2020 — RFE STA (2001-2019) — NDVI 2020 — NDVI STA (1999-2019)

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